

*ACF/OPRE Report*

# A Second Year in Head Start: Characteristics and Outcomes of Children Who Entered the Program at Age Three

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# *ACF-OPRE Report*

## **A Second Year in Head Start: Characteristics and Outcomes of Children Who Entered the Program at Age Three**

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## INTRODUCTION

Head Start is a national program that aims to promote school readiness by enhancing the social and cognitive development of children through the provision of educational, health, nutritional, social, and other services to enrolled children and families. The Head Start program provides grants to local public and private nonprofit and for-profit agencies to provide comprehensive child development services to economically disadvantaged children and families; the Office of Head Start emphasizes a special focus on helping preschoolers develop the reading and mathematics skills they need to be successful in school. The program also seeks to engage parents in their children's learning and to promote their progress toward their own educational, literacy, and employment goals (Administration for Children and Families [ACF] 2009).

The Head Start Family and Child Experiences Survey (FACES) was first launched in 1997 as a periodic longitudinal study of program performance. Successive nationally representative samples of Head Start children, their families, classrooms, and programs provide descriptive information on the population served; staff qualifications, credentials, beliefs, and opinions; classroom practices and quality measures; and child and family outcomes. FACES includes a battery of direct child assessments across multiple domains. It also comprises interviews with the child's parents, teachers, and program managers, as well as direct observations of classroom quality. (For background information on FACES 2006, see West et al. 2007, Tarullo et al. 2008, and West et al. 2008.)

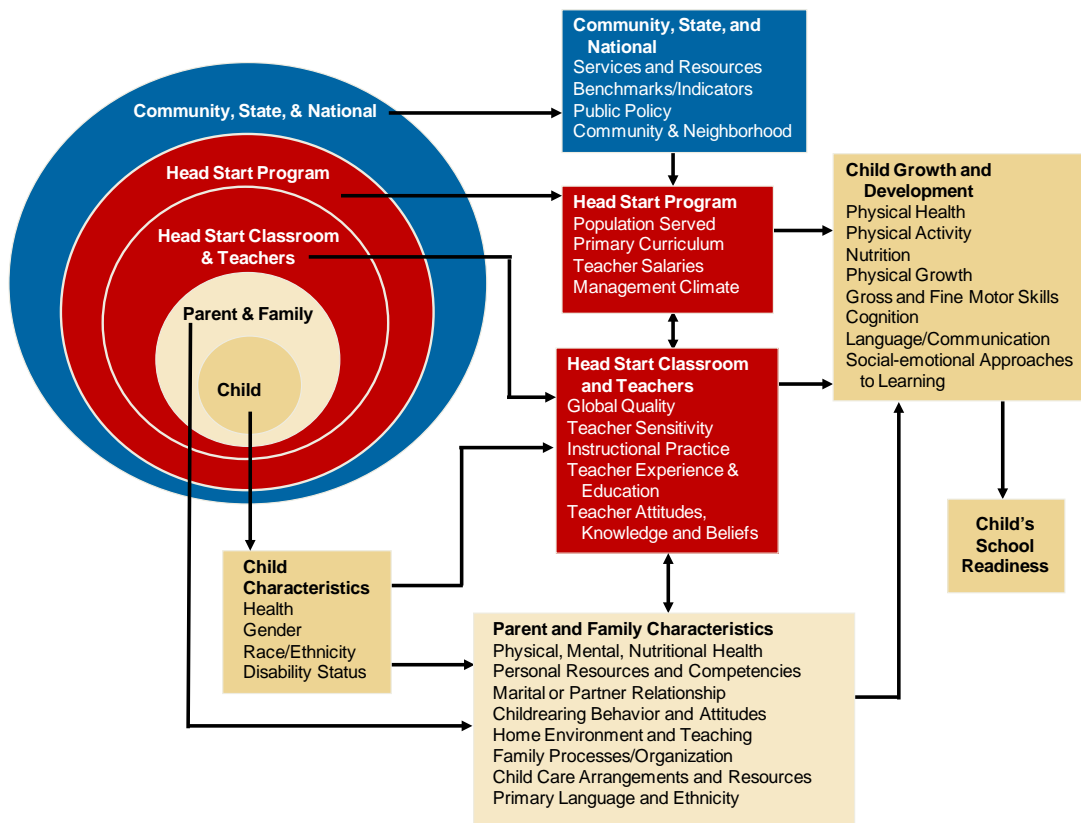
FACES is a tool for measuring Head Start program performance at the national level. This recurring data collection provides the means to assess program performance both currently and over time. Figure 1 offers the conceptual framework for the FACES study. The child is located at the center, surrounded by parents and family, and located within the context of a given Head Start classroom and program. The model

posits that it is through the provision of high-quality, comprehensive educational services (in interaction with their home and classroom contexts) that children make progress toward the goal of physical well-being and cognitive and social-emotional school readiness.

This brief profiles the second year in the program for 3-year-old Head Start children and families who were newly enrolled in fall 2006 (see Tarullo et al. 2008) and are still attending in spring 2008. FACES selects two groups of first-time enrollees—those entering at age 4 and those entering at age 3—who are expected to attend Head Start for one or two years, respectively, prior to kindergarten entry. The 3-year-old group is of particular interest for several reasons: (1) as the Head Start Program Information Report (PIR) shows, 3-year-olds occupy a growing share of the total population served by Head Start, increasing from 24 percent in 1980 to 40 percent in 2007 (ACF 2010); (2) they may differ in important characteristics from children who enter at age 4 in terms of developmental level and exposure to prior child care experiences; and (3) they have the potential to continue in Head Start for two program years or to leave for another prekindergarten experience.<sup>1</sup>

Three-year-olds entering the program for the first time in fall 2006 accounted for almost two-thirds (63 percent) of the children who were newly enrolled in Head Start (Tarullo et al. 2008). Head Start is increasingly being called upon to serve younger children who may have different developmental needs and less familiarity with care experiences outside of the home environment than their 4-year-old classmates. Growing emphasis on the importance of early intervention to improve children's school readiness may influence parents to enroll their children in the program at younger ages or to move them into school-based settings. The increasing availability of state-sponsored prekindergarten programs in many localities, for example, has made it more likely that children will have alternative early care opportunities. However, it is not clear from FACES data what factors influence parents to

**Figure 1. Conceptual Framework**



keep their children in Head Start versus moving them into a different care setting.

In the first section of the report, we provide background on the study methodology and sample. In the next section, we offer information on the children’s characteristics, family demographics, and home life, including language background, educational environment of the home, family routines, and socioeconomic risk status. We also include information on parent involvement in Head Start and their level of satisfaction with their own and their children’s Head Start experiences. Where appropriate, these characteristics are contrasted with those of children who entered as 3-year-olds in fall 2006 but did not complete a second year of Head Start. We chronicle children’s developmental progress over two years of Head Start in the final section, considering whether these outcomes vary by gender, race/ethnicity, or risk status. It is important to note that changes in children’s skills and development during their

program experience reflect a range of influences in their lives, including child-level characteristics, such as maturation and health status, as well as community, program, classroom, peer, and family influences.

**METHODS**

The FACES 2006 sample provides information at the national level about Head Start programs, centers, classrooms, and the children and families they serve. A sample of Head Start programs was selected from the 2004-2005 Head Start Program Information Report (PIR)<sup>2</sup> and approximately two centers per program and three classrooms per center were selected for participation. Within each classroom, nine newly enrolled 3- and 4-year-old children, on average, were randomly selected for the study.<sup>3</sup> Sixty programs, 135 centers, 410 classrooms, 365 teachers, and 3,315 children participated in the study in the fall of 2006. Children in the study were administered a battery of direct child assessments, their parents and teachers were

interviewed, their teachers were asked to complete a set of ratings using either a Web-based or paper instrument,<sup>4</sup> and interviews were conducted with the directors of the programs and centers as well as with education coordinators.

In spring 2007, data were collected again for the group of children completing their first year of the Head Start program.<sup>5</sup> Mathematica data collection teams assessed the children at their Head Start centers, interviewed the children's lead teachers, and interviewed their parents. Children's classrooms were observed and teachers were asked to complete another set of ratings for each sampled child in their classroom.

By spring 2008, most of the children who were 4 years old when they entered Head Start and the FACES study had graduated from Head Start and were attending kindergarten.<sup>6</sup> The remaining children, the focus of this report, were 3 years old when they entered Head Start and FACES and were attending a second year of Head Start in spring 2008.<sup>7</sup> Data were collected over a four-month period (March – June 2008). Data collection teams once again assessed the children at their Head Start centers and interviewed their lead teachers. Teachers were asked to complete a set of ratings for all FACES children in their classroom using either a Web-based or paper instrument.<sup>8</sup> Children's parents were interviewed by phone or in person.<sup>9</sup>

Child assessments were completed for 97 percent of the 1,203 children who enrolled as 3-year-olds and were still attending Head Start in spring 2008 and 93 percent of their parents were interviewed.<sup>10</sup> Head Start teachers completed a set of teacher ratings for 94 percent of the children. In this report, we use data from the direct child assessments to report on children's cognitive and physical outcomes at the beginning of their first year in Head Start and at the end of their first and second years in the program. Parent and teacher ratings provide concurrent information about children's social skills, approaches to learning, problem behaviors, and academic and nonacademic accomplishments. Assessor ratings, completed at the end of the direct child assessments,

provide another source of information about children's social-emotional outcomes. We also use parent interview data to describe children's backgrounds and home environments.

**Direct child assessments.** The spring 2008 battery of direct child assessments, like the one used in earlier rounds of data collection, included a set of standardized preschool assessments designed to measure children's cognitive outcomes (language, literacy, and mathematics) and physical outcomes (height and weight) through an untimed, one-on-one assessment of each child. Below, we describe the measures used and report on children's cognitive scores when they first entered Head Start and at the end of their first and second years in the program, as well as changes in scores from the beginning of Head Start to graduation from the program (fall 2006-spring 2008).

The procedures to administer the direct child assessments in spring 2008 were the same as in spring 2007.<sup>11</sup> The direct assessment began with a language screening to determine whether children from households in which English was not the primary spoken language should be assessed in English or Spanish, or should be administered only the PPVT-4 and weighed and measured.<sup>12</sup> However, if a child had been assessed in English in one of the prior rounds, he or she was assessed in English in spring 2008. For the assessments, we used the same standard materials as for the early rounds. For example, the stimulus and response pages from the Peabody Picture Vocabulary Test-Fourth Edition (PPVT-4) (Dunn and Dunn 2006) and Woodcock-Johnson Tests of Achievement-Third Edition (WJ III) (Woodcock et al. 2001) measures were used. Computer-assisted personal interviewing (CAPI) was used again when administering the assessments to facilitate the movement from one measure to the next without the assessors having to calculate stopping or starting points (that is, basals and ceilings). Assessors read the questions and instructions from a computer screen. The child responded by pointing to the correct answers on the assessment easel or by giving a verbal response. Assessors entered the child's



responses into a laptop computer using software that ensured that all basal and ceiling rules were followed.

**Parent interviews.** FACES 2006 used a computer-assisted interview to collect information from Head Start parents in a variety of areas, including the characteristics of households (such as household income, number of adult household members, and languages spoken in the home) and household members (including age, race/ethnicity, and relationship to the study child).<sup>13</sup> Information also was collected on aspects of the children's home life and child-care arrangements, as well as parents' ratings of their children's social skills; problem behaviors; and language, literacy, and mathematics accomplishments.

**Teacher child reports.** In spring 2007, FACES 2006 again conducted CAPI interviews with lead teachers about their educational backgrounds, professional experience, and credentials. Teachers reported on the learning activities scheduled in their classrooms. Assessors asked teachers to estimate the amount of time they spend on both teacher-directed and child-selected activities in a typical day, as well as frequency of various language and literacy development and mathematics activities. Teachers were asked whether they have a principal curriculum guiding the classroom activities and, if so, whether they received training in how to use it. They also were asked how they assess the children's level of achievement and progress over the Head Start year. In the spring interview, teachers were asked about the management climate—the policies and procedures in their Head Start program. They also were asked about the strengths and weaknesses of the main curriculum, whether they have a regular mentor, their experiences with that mentor, and their involvement in training or technical assistance during this program year.

As in previous waves, teachers were asked to use a Teacher Child Report form to rate each FACES child in their classroom on a set of items that assess the child's accomplishments, cooperative classroom behavior, behavior problems, and approaches to learning. Teachers

also provided reports of children's health, developmental conditions, and absences during the past program year.

**Assessor ratings.** At the end of the one-on-one testing sessions with children, the assessor completed a set of rating scales evaluating the child's behavior in the assessment situation, including the child's approaches to learning and any problem behaviors. FACES 2006 used four subscales from the Leiter-R Examiner Rating Scales: (1) attention, (2) organization/impulse control, (3) activity level, and (4) sociability.

**Population estimates.** Most of the statistics found in this report are estimates of key characteristics of the population of 3-year-old children who entered Head Start for the first time in fall 2006 (and were still enrolled in spring 2008) and their parents and families (Moiduddin et al. 2010).<sup>14</sup> The data used to report on child and family characteristics and child outcomes are weighted to represent this population.<sup>15</sup> The exceptions are the descriptions of 3-year-old children who attended one or two years of Head Start. For that analysis, we include 3-year-old children who entered Head Start in fall 2006, were enrolled in spring 2007, but who were no longer enrolled in spring 2008. Data used for the analysis of children who attended one or two years are weighted to represent this larger population of children and families.

#### **CHILD AND FAMILY DEMOGRAPHICS, PARENTING, AND THE HOME ENVIRONMENT**

Head Start serves a diverse population of low-income children and their families. Because families play such an important role in a child's development, Head Start has made the family a cornerstone of its framework. Data from the FACES 2006 Parent Interview offer information on the family and household environment of entering Head Start children as well as their experiences in Head Start programs. In this section, we begin by presenting child and household demographic characteristics for the population of children who entered Head Start as 3-year-olds in fall 2006 and were still enrolled in the program in spring 2007 or spring 2008, completing one or two years of Head Start. We then present key findings on the home learning

environment and parenting practices and family health care and health status for the population of children who entered Head Start as 3-year-olds in fall 2006 and were still enrolled in the program in spring 2008. We also describe parents' social support and perceptions of their own and their children's Head Start experiences. Any differences between groups noted in the text are statistically significant at the  $p < .05$  level or better unless otherwise noted.

### **FAMILY AND HOUSEHOLD CHARACTERISTICS OF CHILDREN WHO ENTERED HEAD START AS 3-YEAR-OLDS AND COMPLETED ONE OR TWO YEARS**

In fall 2006, approximately 458,000 children were newly enrolled in 14,400 Head Start centers across the U.S. Almost two-thirds (63 percent) of first-time Head Start children were 3 years old and the others were 4 years old or older (Tarullo et al. 2008; West et al. 2008). Among the 3-year-olds entering Head Start in fall 2006, 88 percent went on to complete at least one year of Head Start and 58 percent completed two years.

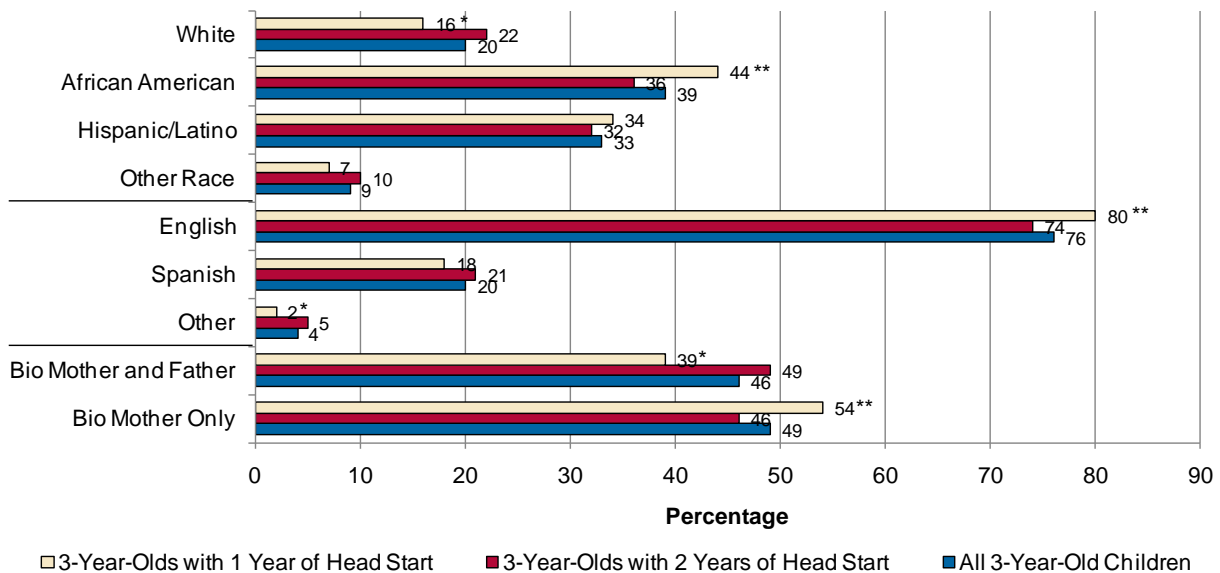
Children entering Head Start for the first time in fall 2006 had diverse family lives (Tarullo et al. 2008; West et al. 2008); the finding is equally true when the focus is on only those children who entered as 3-year-olds. Current analyses indicate that, overall, children who entered Head Start as 3-year-olds are most likely to be African American (39 percent), followed by Hispanic/Latino (33 percent), and White (20 percent). One-quarter of children entering Head Start as 3-year-olds are spoken to primarily in a language other than English at home. Slightly less than half (46 percent) live with both their mother and father, and almost half (49 percent) live with their mother (biological or adoptive) only. More than half of the children (57 percent) who entered Head Start as 3-year-olds come from households with incomes at or below the federal poverty threshold.<sup>16</sup> Sixty-six percent of all resident mothers and 58 percent of all resident fathers have at least a high school diploma or GED.

There are only minor differences in demographic characteristics for children who entered Head Start as 3-year-olds and spent one versus two years in Head Start. We illustrate these differences in Figure 2. Compared with children completing only one year in Head Start, children completing two years of Head Start are more likely to be White and less likely to be African American. They are less likely to be spoken to in English at home. They also are more likely to be living with both of their parents, and less likely to be living with a single mother. However, educational attainment is similar for resident parents of children who entered at age 3 and completed one or two years of Head Start (not shown).

In addition to examining demographic characteristics individually, we also developed an index of cumulative risk to examine the percentage of children experiencing multiple economic hardships. Coming from a family with an income below the federal poverty line, living in a single-parent household, and having parents who did not complete high school are identified as risk factors for poor developmental and educational outcomes.<sup>17</sup> Children with one of these risk factors are more likely to have others, and research has shown that having more than one risk factor can have negative consequences for children's development and school readiness skills.<sup>18</sup> In FACES 2006, an index was created as a measure of cumulative family risk. The number of risks is based on three characteristics of children's living circumstances: whether the child resides in a single-parent household, whether the household income is below the federal poverty threshold, and whether the child's mother has less than a high school diploma. Slightly less than half (45 percent) of all children entering Head Start as 3-year-olds are from families experiencing more than one risk factor, while 37 percent experience one risk factor, and 18 percent experience none. The distribution of families experiencing zero, one, two, or three risk factors is similar across children who stay in Head Start for one year or two years.



**Figure 2. Background Characteristics of 3-Year-Old Children with One versus Two Years of Head Start (Percentage in Each Category): Fall 2006**



Source: Fall 2006 FACES Parent Interview

Note: Statistics are weighted to represent 3-year-old children entering Head Start for the first time in fall 2006 and who went on to complete one or two years of Head Start.

Asterisks indicate a significant difference in the proportion of children in each subgroup (for example, White) for 3-year-old children with one versus two years of Head Start.

\*p<.05; \*\*p<.01; \*\*\*p<.001

**PARENTING AND THE HOME ENVIRONMENT FOR CHILDREN WHO ENTERED HEAD START AS 3-YEAR-OLDS AND ARE COMPLETING THEIR SECOND YEAR**

**Parenting Approaches and Attitudes**

**Child-rearing practices.** Parenting practices and parents’ attitudes toward child-rearing can affect their relationships and interactions with their children. Earlier cohorts of FACES found that parenting styles were correlated with child behavior and that family engagement in activities together (for example, telling stories or playing games) was correlated with child cognitive skills (ACF 2003). In spring 2008, the parents of FACES children were asked a series of questions designed to capture information about parenting practices, including parenting style, disciplinary approaches, and routines. We examined differences in these behaviors by child race/ethnicity and number of family risk factors.

Parents were asked to indicate to what extent each of 13 items from The Child-Rearing Practices Report (Block 1965, cited in Croninger and Lee 2001) describes them. From these, four subscales were created:

- The Parental Warmth scale reflects a warm, supportive parenting style in which the parent encourages curiosity. Items contributing to this scale include “My child and I have warm intimate moments together” and “I make sure my child knows that I appreciate what (he/she) tries to accomplish.”
- The Parental Energy scale indicates the parent’s energy and consistency in enforcing rules. This scale includes statements such as “I have little or no difficulty sticking with my rules for my child” and “Once I decide how to deal with a misbehavior of my child, I follow through.”

- The Authoritative scale reflects a less harsh parenting style with greater use of rationales for discipline. Statements in this scale include “I control my child by warning (him/her) about the bad things that can happen” and “I teach my child that misbehavior or breaking the rules will always be punished.”
- The Authoritarian scale indicates a stricter, more directive, parenting style. This scale includes items such as “I do not allow my child to get angry with me” and “I believe that a child should be seen and not heard.”

Possible scores on each subscale range from 1, indicating the statements included in the scale are “not at all” like the parent, to 5, indicating that they describe the parent “exactly.” On average, in spring 2008, parents of children who entered Head Start as 3-year-olds score higher on the parental warmth scale (4.2) and lower on the authoritarian scale (2.2). Scores on the parental energy (4.0) and authoritative (3.5) scales fall between these extremes. Looking across racial/ethnic groups, mean parental warmth scores are similar, but slight differences emerge in other areas. Parental energy scores are lower for parents of Hispanic/Latino children than for parents of White or African American children, and parental authoritative scores are higher for parents of White children than for parents of African American or Hispanic/Latino children. Finally, parental authoritarian scores are lower for parents of White children than for all other groups. When examining scores by cumulative risk, we see that parental energy and authoritative scores are higher in families with two or more risk factors than in those with only one risk factor (a finding inconsistent with expectations), and parental authoritarian scores are lower in families with no risk factors than in those with one or two or more risk factors. Although these differences are statistically significant, they are small (in all cases, 0.1 points on a 1-5 scale).

**Discipline.** FACES also asked about specific disciplinary practices and routines in the home. As indicated in Hulseley et al. (2010), in spring 2007 at the end of the first year of Head Start, 32 percent of parents whose children entered Head Start as 3-year-olds reported spanking

and 68 percent reported using a time out. In spring 2008 at the end of the second year of Head Start, 28 percent of parents report spanking their child in the past week and 66 percent report using a time out. Among racial/ethnic groups, parents of African American children are most likely to report spanking and parents of White children are most likely to report using time outs in spring 2008, compared to all other groups.

**Household routines.** Parents’ interactions with their children at home, including the rules and routines they establish for their children, set the stage for socialization at school. Studies have found time spent eating meals together as a family to be associated with fewer behavior problems (Hofferth and Sandberg 2001) and that dinner table conversation supports literacy development (Beals and Snow 2006). In terms of time spent eating meals together, in spring 2008, 68 percent of children completing a second year of Head Start eat dinner with their families five or more days per week. Additionally, 87 percent of children have a regular bedtime. African American children are less likely to eat dinner with their families every night than children in Other racial/ethnic groups and are less likely to have a regular bedtime than White or Hispanic children. Across risk groups, children are equally likely to have a regular bedtime and eat dinner with their families.

**Home and community learning activities.** Head Start children participate in a variety of learning activities with their families, both in and outside of the home. One common activity is being read to by a parent or family member. Across the entire population of children completing a second year of Head Start in spring 2008, 74 percent of parents report reading to their child three or more times each week (including daily. This is the same percentage who reported reading to their child three or more times each week (including daily) in spring 2007 among all children who entered Head Start as 3-year-olds and completed at least one year (Hulseley et al. 2010).

Despite relatively high rates of reading overall, there were differences across subgroups.

Figure 3 presents the spring 2008 frequency of reading for different groups of children based on race/ethnicity, primary home language spoken to the child, and family risk. Parents with children who are White or Other race/ethnicity are most likely to report reading to their child every day. When examining groups by primary language, parents from households in which English is the primary language spoken to the child are more likely to report reading to their child three or more times a week (but not every day) than parents in households where a non-English language is the primary language spoken to the child. There is no significant difference in the percentage of parents reporting they read daily by household language. There is also no difference by risk status.

As shown in Figure 4, in spring 2008, parents report engaging in a variety of additional home learning activities with their child each week. For children who were 3 years old at program entry, activities engaged in with the highest frequency (reported by more than 95 percent of parents) include teaching the child letters, words, or numbers; playing indoors with toys or games; taking a child along on errands; and talking about what happened at Head Start. Working on arts and crafts and talking about TV programs or videos occur with the lowest frequency. The highest-frequency activities are similar across racial/ethnic, language, and risk groups (not shown). Looking at the frequency of specific activities, only a few significant differences emerge across racial/ethnic groups, most of which are between parents of Hispanic/Latino and African American children. Parents of children who are spoken to primarily in English at home report engaging in five activities with a higher frequency than parents of children who are spoken to primarily in a language other than English: working on arts and crafts, involving the child in household chores, talking about what happened at Head Start, talking about TV programs or videos, and playing counting games. There are no differences by family risk.

Parents also report engagement with their children in community-based monthly activities in spring 2008. For all children who were 3 years

old at program entry (Figure 5) and across racial/ethnic, language, and risk groups (not shown), parents report going to a mall and visiting a playground or park in the last month with the highest frequency (from 68 to 89 percent, depending on the group). They report attending a play, concert, or live show; visiting an art gallery, museum, or historical site; and visiting a zoo or aquarium with the lowest frequency (9 to 29 percent, depending on the subgroup). Parents of White children and children of Other race/ethnicities and those from homes in which the primary language spoken to the child is not English also report attending athletic or sporting events with relatively low frequency (25-27 percent of each group).

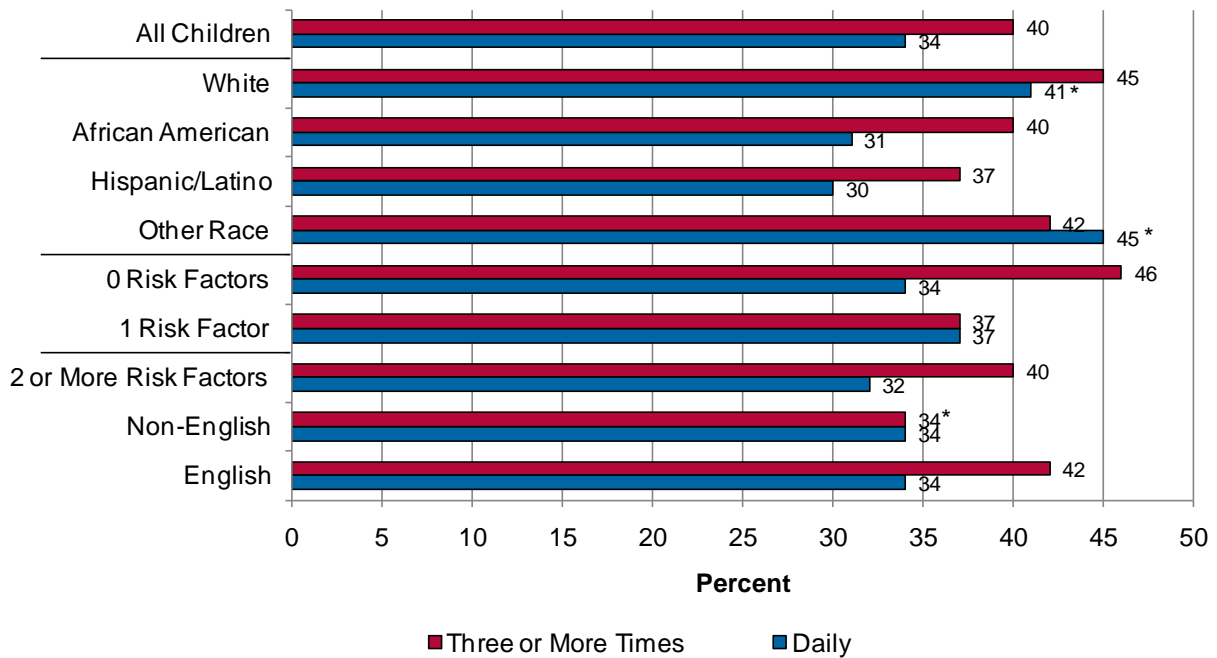
### **Child and Family Health**

**Child health care.** The inclusion of health and wellness services in Head Start's comprehensive mission reflects the recognition that health care practices influence multiple aspects of a child's development. In spring 2008, parents report that the vast majority of children had a regular medical (99 percent) or dental (95 percent) checkup in the past year. Ninety-six percent of children reportedly have health insurance, and the majority is covered by private insurance (61 percent) and/or Medicaid (65 percent). Twenty-three percent participate in SCHIP.

**Child attendance at Head Start.** Children's health has implications for the regularity of their attendance at their Head Start program. According to teacher reports, slightly less than half of children (48 percent) missed fewer than five days of the program in the prior year, while a fifth of children missed 11 or more days.

**Parent health behaviors.** Family health behaviors and the health status of children's caregivers can affect a child's health, well-being, and development. In spring 2008, 23 percent of parents report that they smoke, and 32 percent report that a member of their household smokes. Less than 2 percent of respondents indicate that a household member had gotten into trouble due to alcohol in the past year, and none report trouble due to drugs. In terms of health

**Figure 3. Frequency of Reading to Child in the Past Week by Child and Family Characteristics: Spring 2008**



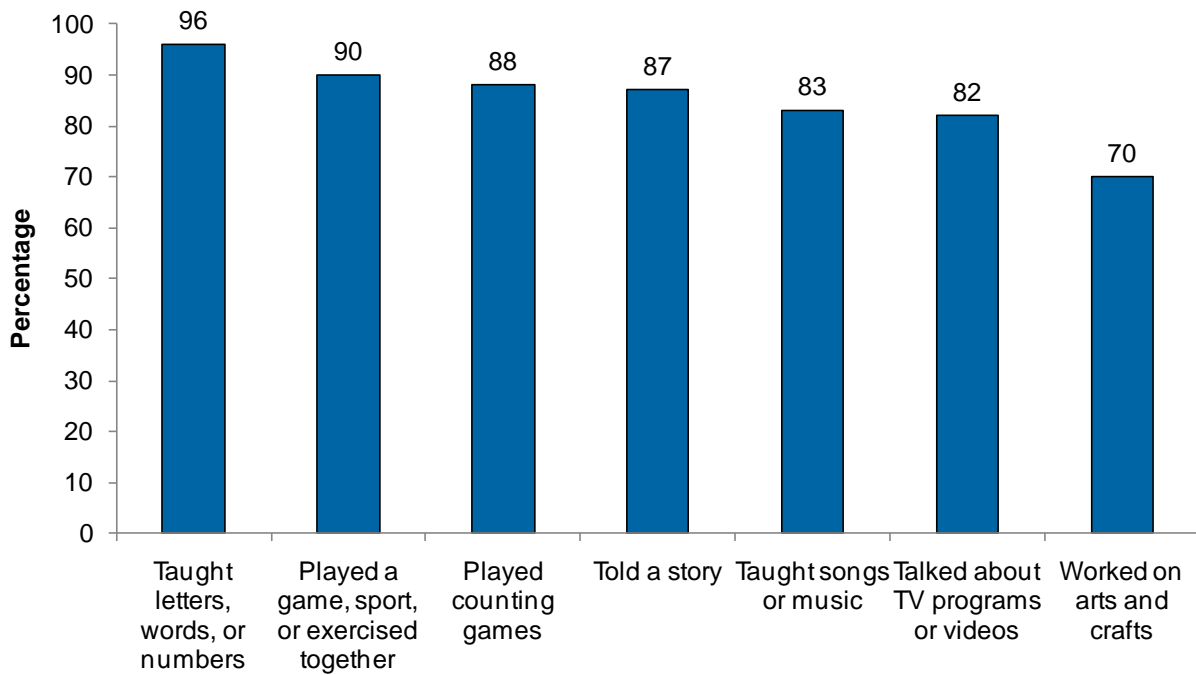
Source: Fall 2006 and Spring 2008 FACES Parent Interview

Note: Statistics are weighted to represent 3-year-old children entering Head Start for the first time in fall 2006 and who were still enrolled in spring 2008.

Within each category (race/ethnicity, risk, language,) asterisks indicate subgroups that are significantly different from any other subgroups in the category for the specified level of reading (three or more times; daily) at a level of at least  $p < .05$ .

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

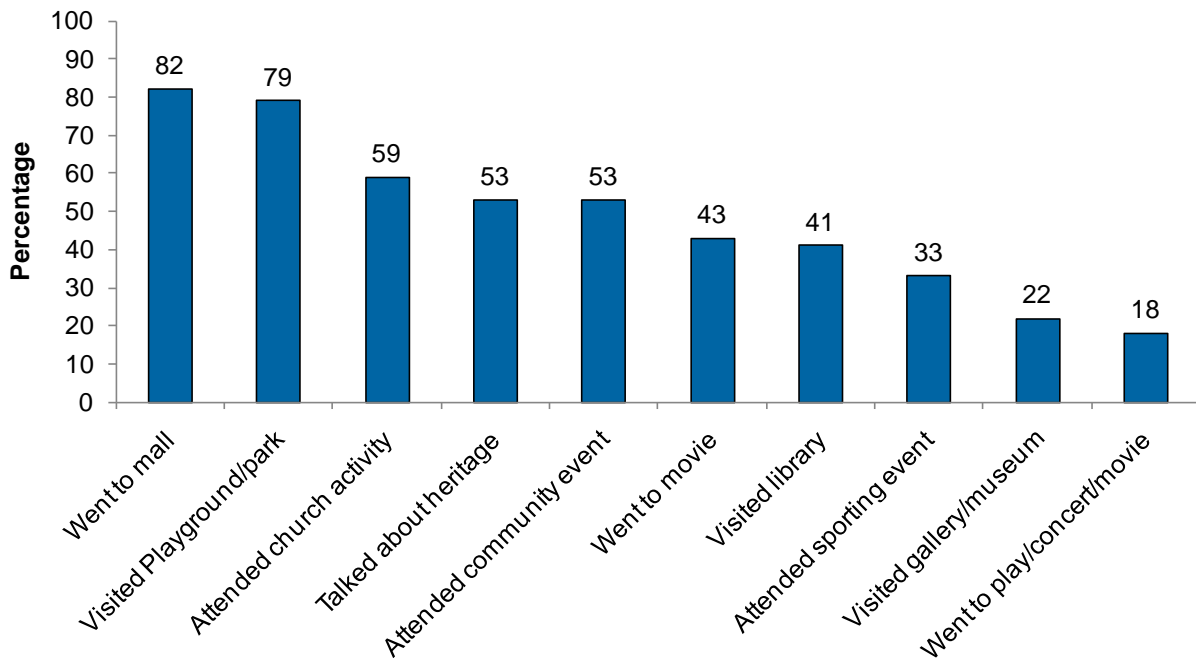
**Figure 4. Family Members' Activities with Child in the Past Week: Spring 2008**



Source: Spring 2008 FACES Parent Interview

Note: Statistics are weighted to represent 3-year-old children entering Head Start for the first time in fall 2006 and who were still enrolled in spring 2008.

**Figure 5. Family Members' Activities with Child in the Past Month: Spring 2008**



Source: Spring 2008 FACES Parent Interview

Note: Statistics are weighted to represent 3-year-old children entering Head Start for the first time in fall 2006 and who were still enrolled in spring 2008.



insurance, parents are less likely to have coverage than their children; in spring 2008, 71 percent of parents report having health insurance, compared to 96 percent of children.

**Parent mental health.** In spring 2008, parents were asked a set of questions from the Center for Epidemiologic Studies Depression Scale (CES-D, short form; Radloff 1977). While the majority of parents do not report symptoms of depression (63 percent), the percentage reporting symptoms of moderate and severe depression is 10 percent and 7 percent, respectively. By way of comparison, in spring 2007, 58 percent of parents of 3-year-olds reported no symptoms of depression, 12 percent reported moderate symptoms, and 9 percent reported severe symptoms (Hulseley et al. 2010). Among racial/ethnic groups (Figure 6), White parents are most likely to report severe symptoms of depression compared with all other racial/ethnic groups, and Hispanic/Latino parents are least likely. This pattern is consistent with that found among parents of 3- and 4-year-old children in spring 2007 (Hulseley et al. 2010). The mean number of symptoms reported by White parents is higher than the number reported by African American or Hispanic/Latino parents. Looking at patterns by risk status, parents in families experiencing two or more risk factors are most likely to report symptoms of severe depression (11 percent of parents in families with two or more risks versus 5 percent and 6 percent in families with one risk or no risks, respectively), although the difference is not significant between families with two risks and one risk. Parents in families experiencing two or more risk factors report the highest mean number of depressive symptoms.

### **Parent Involvement in Head Start**

Parents report getting involved in their child's Head Start program in a variety of ways (Figure 7). In spring 2008, during their children's second year in Head Start, types of involvement that occur with the highest frequency include attending a parent/teacher conference (84

percent) and having a home visit with Head Start staff (74 percent). More than 50 percent of parents also report volunteering in the classroom (59 percent) and preparing food or materials for special events (56 percent). Activities that occur with the lowest frequency include preparing or distributing newsletters (17 percent) and calling or visiting another Head Start parent (20 percent).

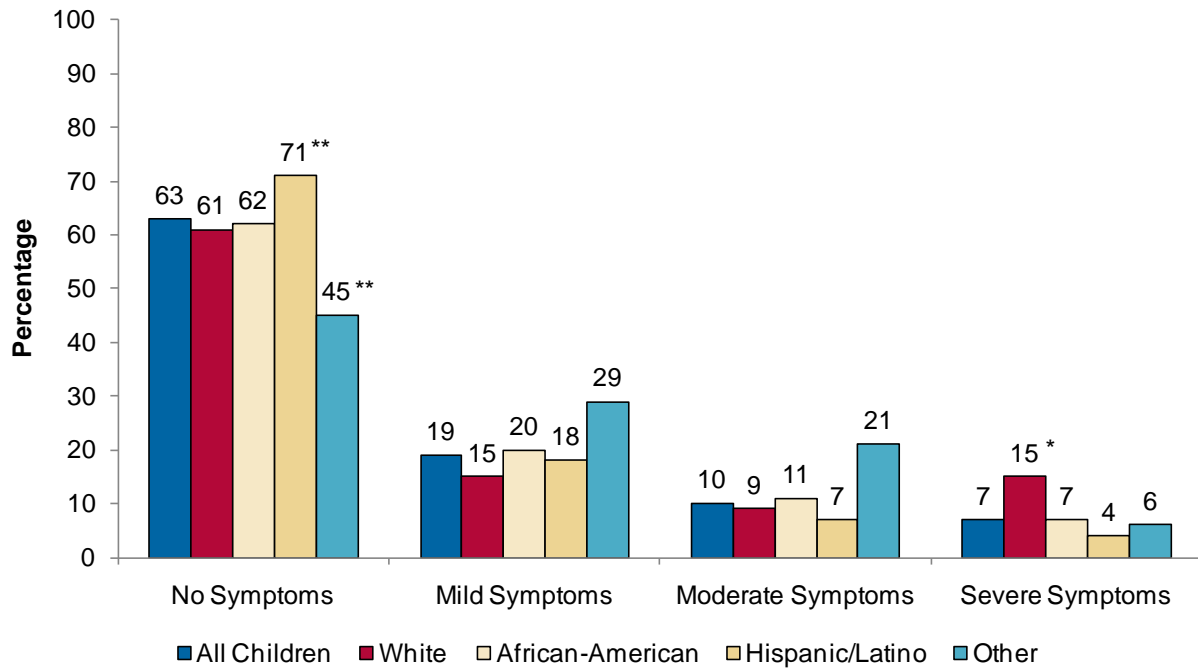
### **Social Support**

FACES asked parents about the types of social support they receive from various sources, including family, friends, Head Start staff, and other professionals. In almost all cases, in spring 2008, the majority of parents report that they can always find support to meet various needs, such as getting a ride to the doctor or having someone to talk to about various problems (although only 49 percent report it as always true that they can find someone to watch their child while they run an errand). Parents are most likely to report finding family members very helpful (88 percent), followed by Head Start staff (60 percent), friends (48 percent), and other professionals (26 percent).

### **Satisfaction with Head Start**

In spring 2008, parents report high levels of satisfaction with Head Start since the time their child started in the program; this is consistent with findings for earlier FACES cohorts (ACF 2003) and findings from earlier waves of the 2006 cohort (Aikens et al. 2010). Also consistent with previous cohorts, satisfaction with child-related aspects of Head Start (such as helping the child to grow and develop or identifying and providing services for the child) is greater than with family-related aspects (for example, being open to parents' ideas and participation and identifying or providing services for the family). While each of the four child-related aspects is reported as very satisfactory by more than 83 percent of parents, only one of the four family-related facets of the program (respecting family's culture and background) is rated that highly.

**Figure 6. Depressive Symptoms Among Parents Overall and by Race/Ethnicity: Spring 2008**



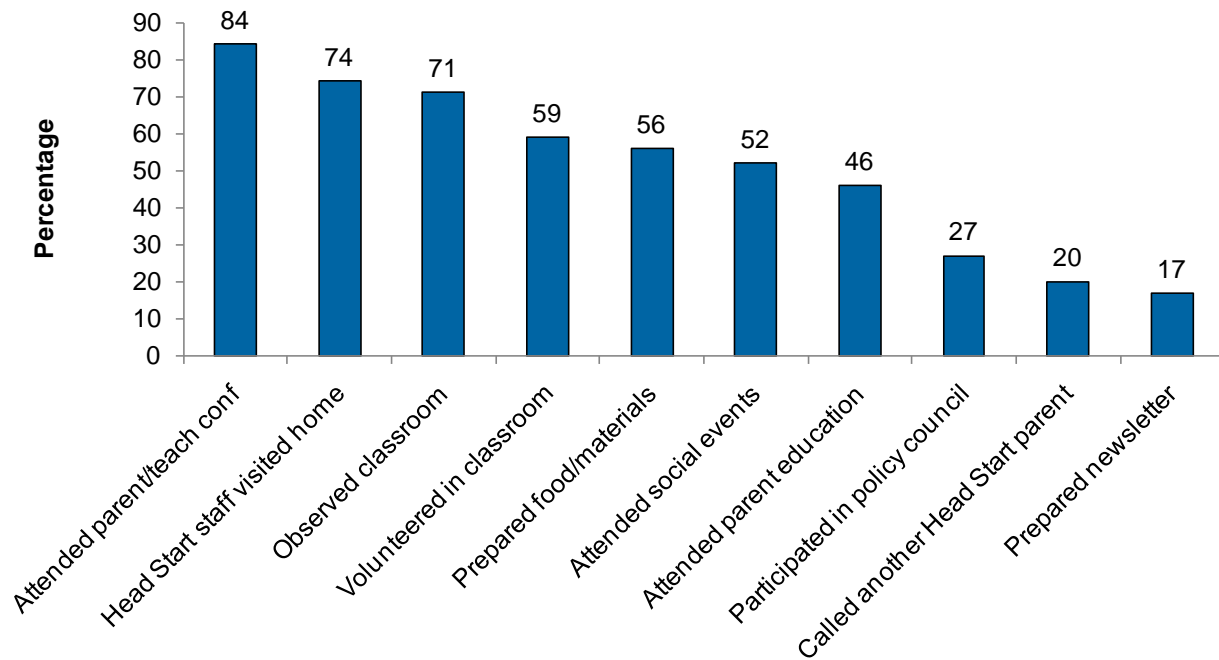
Source: Fall 2006 and Spring 2008 FACES Parent Interview

Note: Statistics are weighted to represent 3-year-old children entering Head Start for the first time in fall 2006 and who were still enrolled in spring 2008.

Within each category of depressive symptoms, asterisks indicate subgroups that are significantly different from all other subgroups in the category.

\*p<.05; \*\*p<.01; \*\*\*p<.001

**Figure 7. Parent Involvement in Head Start This Year: Spring 2008**



Source: Spring 2008 FACES Parent Interview

Note: Statistics are weighted to represent 3-year-old children entering Head Start for the first time in fall 2006 and who were still enrolled in spring 2008.

However, even the least satisfactory aspect—helping parents to become more involved in community groups—is reported as very satisfactory by more than half (57 percent) of parents.

The spring 2008 parent interview included a list of children’s and parent’s positive experiences with Head Start and asked parents whether each item characterized their own and their child’s experiences with the program “never,” “sometimes,” “often,” or “always.” For each item, a majority of parents report that this is “always” their own and their child’s experience. Parents rate as lowest “child gets lots of individual attention” (58 percent). For each of the other items, at least 83 percent of parents report always having a positive experience.

### **Child Care Outside of Head Start**

Many Head Start parents supplement their child’s time in the program with various forms of child care. Thirty-nine percent of children are in a child care arrangement before or after Head

Start in spring 2008 (during their second year in the program). The most common arrangement overall and across racial/ethnic and risk groups is care by a relative.

Parents also report on the amount of time children spend in child care. On average, children with an additional care arrangement beyond Head Start spend 15.5 hours per week in those child care settings. Those with an additional care arrangement spend an average of 39 hours per week in Head Start and child care combined. Hours range from 37-42 hours across racial/ethnic groups. Across all children (regardless of any additional care arrangement), children spend 30 hours per week, on average, in Head Start and child care combined. In spring 2007, at the end of their first year of Head Start, parents of 3-year-olds reported that their children spent 32 hours per week, on average, in Head Start and child care combined (Hulseley et al. 2010). Accounting for time in both Head Start and child care, African American children spend more time in Head Start and child care

combined than children in other groups during their second year of Head Start. There are no differences for time in total out-of-home care by risk status.

### **CHILD OUTCOMES AT HEAD START ENTRY AND AFTER ONE OR TWO YEARS IN THE PROGRAM**

In this section, we describe the cognitive, social-emotional, and health and physical development of children who entered Head Start for the first time in fall 2006 at age 3 and were still enrolled in spring 2008 after two years in the program. In the area of children's cognitive development, we describe the skills of children who were assessed in English at Head Start entry, at the end of their first year in the program, and at the end of their second year.<sup>19</sup> We then turn to a discussion of children's social-emotional development and conclude by describing their health and developmental needs as they were completing Head Start. Throughout this section, we first describe the outcomes for all children who entered as 3-year-olds and were still enrolled in spring 2008 and then provide descriptive information by important subgroups, including gender, race/ethnicity, and number of family risks.<sup>20</sup>

We report on children's skills on norm- and criterion-referenced measures, using raw scores, *W* scores, item response theory-based (IRT) scores, and standard scores. Standard scores provide information on children's performance relative to same-age peers. These scores have a mean of 100 and a standard deviation of 15. An increase in a child's standard score signifies that the child is making progress relative to peers. In contrast, *W*, IRT, and raw scores allow for measurement of change or growth in performance on the same scale over time. They are an indicator of absolute rather than relative performance.

#### **Child Cognitive Development**

**Instruments used.** To assess children's skills and knowledge, norm- and criterion-referenced measures of language, writing, and math development were administered directly. Across rounds, the battery included both English and Spanish measures of receptive vocabulary: the

Peabody Picture Vocabulary Test, Fourth Edition (PPVT-4) (Dunn and Dunn 2006) and the Test de Vocabulario Imagenes Peabody (TVIP) (Dunn et al. 1986).<sup>21</sup> The battery also measured children's letter-word knowledge and skills in applied problems and writing, using the Letter-Word Identification, Applied Problems, and Spelling subtests from the Woodcock-Johnson Psycho-Educational Battery, Third Edition (WJ III) (Woodcock et al. 2001) and the Bateria III Woodcock-Muñoz (Woodcock et al. 2004).<sup>22</sup> To assess math skills, the battery included a supplemental set of math items from the Early Childhood Longitudinal Study, Birth and Kindergarten Cohorts (ECLS-B and ECLS-K) math assessment (U.S. Department of Education 2002; Najarian et al. 2010; Rock and Pollack 2002).<sup>23</sup> Items also were included to tap children's understanding of story and print concepts.<sup>24</sup>

**Language screening.** At Head Start entry in fall 2006, the direct child assessment began with a screening to determine whether children who primarily spoke a language other than English at home should be assessed in English, assessed in Spanish, or administered only the PPVT-4 and weighed and measured. Two subtests from the Preschool Language Assessment Survey 2000 (Pre-LAS 2000) (Duncan and DeAvila 1998), Simon Says and Art Show, were used as screening tools. Children whose home language<sup>25</sup> was English were administered the cognitive assessment battery in English regardless of their scores on the language screener. If a child made five consecutive errors on both the Simon Says and the Art Show and primarily spoke Spanish at home, he or she was administered the PPVT-4 and then routed to the Spanish-language cognitive assessment. A child who made five consecutive errors on both the Simon Says and the Art Show and did not primarily speak English or Spanish was administered only the PPVT-4, and was weighed and measured. Children whose primary home language was not English but who passed the screener received the cognitive assessment battery in English.

In subsequent rounds (spring 2007 and spring 2008), an adapted version of the screening

procedure was used. All children were administered the Simon Says task of the Pre-LAS 2000. Following this task, those who primarily spoke English at home and had passed the language screener in the previous round were routed to the English version of the assessment. All other children were administered both Simon Says and Art Show and, as in fall 2006, performance on both tasks was used to determine whether these children

should be assessed in English, assessed in Spanish, or administered only the PPVT-4 and weighed and measured.

**Children assessed in English.**<sup>26</sup> Children completing a second year of Head Start score below national norms on most measures of language and math development over the course of their enrollment in Head Start (Table 1). Notably, however, children completing

**Table 1. Mean Standard Scores for 3-Year-Old Children Completing a Second Year of Head Start Taking the Assessment in English Across Waves: Fall 2006, Spring 2007, Spring 2008, Fall-Spring 2008 Change**

Scales (standard scores)	Number of cases	Fall 2006	Spring 2007	Spring 2008	Fall-Spring 2008 Change
		Mean	Mean	Mean	Mean
PPVT-4	932	86.3	87.8	92.4	6.1***
TVIP <sup>a</sup>	69	88.4	87.4	84.4	-4.0*
WJ III: Letter-Word Identification	840	95.2	102.1	103.1	7.9***
WJ III: Spelling	905	97.9	97.4	99.9	2.0
WJ III: Applied Problems	802	93.8	94.2	93.3	-0.5

Source: Fall 2006, Spring 2007, and 2008 FACES Direct Child Assessment.

Note: Statistics are weighted to represent 3-year-old children entering Head Start for the first time in fall 2006 and who were still enrolled in spring 2008.

<sup>a</sup> These scores are for children from Spanish-speaking homes who passed the language screener threshold and were assessed in English at each wave.

\*p<.05; \*\*p<.01; \*\*\*p<.001.

a second program year make statistically significant progress toward norms during their program enrollment in English receptive vocabulary (+6.1 standard score points) and letter-word knowledge (+7.9 standard score points) (Figure 8). In fact, children score above the national average in letter-word knowledge after one year in the program. In early writing (that is, WJ III Spelling), they approach norms by the end of their second year. While children gain 6 standard score points in their English receptive vocabulary during program enrollment, they still remain about two-thirds of a standard deviation below norms as they are completing the program. On the other hand, children assessed in English who are from homes where Spanish is primarily spoken move away from norms in the area of Spanish receptive vocabulary and score about 4 points lower by program exit. Although this latter group of children experiences losses in their Spanish receptive

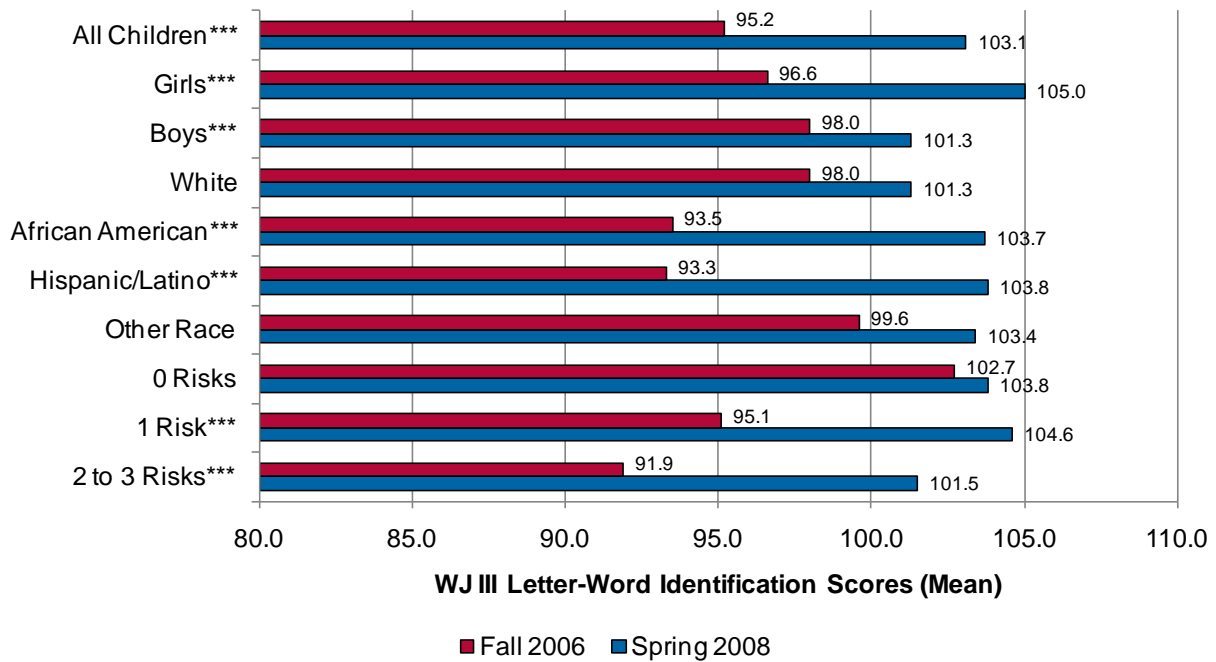
vocabulary skills during program enrollment, they also experience gains of 9.8 standard score points in their English receptive vocabulary during this period (76.3 [fall 2006], 80.3 [spring 2007], and 86.1 [spring 2008]).<sup>27</sup>

On criterion-referenced measures,<sup>28</sup> children completing a second year in Head Start make progress across developmental areas. For example, on the ECLS math items, while only 16 percent of children completing a second program year are able to demonstrate number and shape skills at Head Start entry, 38 percent are able to do so at the end of their first program year; by the end of their program enrollment nearly three-quarters are able to do so (Figure 9).

**Gender.** Both boys and girls completing a second program year make similar progress toward norms in the areas of receptive



**Figure 8. Mean WJ III Letter-Word Scores for Children Assessed in English: Fall 2006 - Spring 2008**



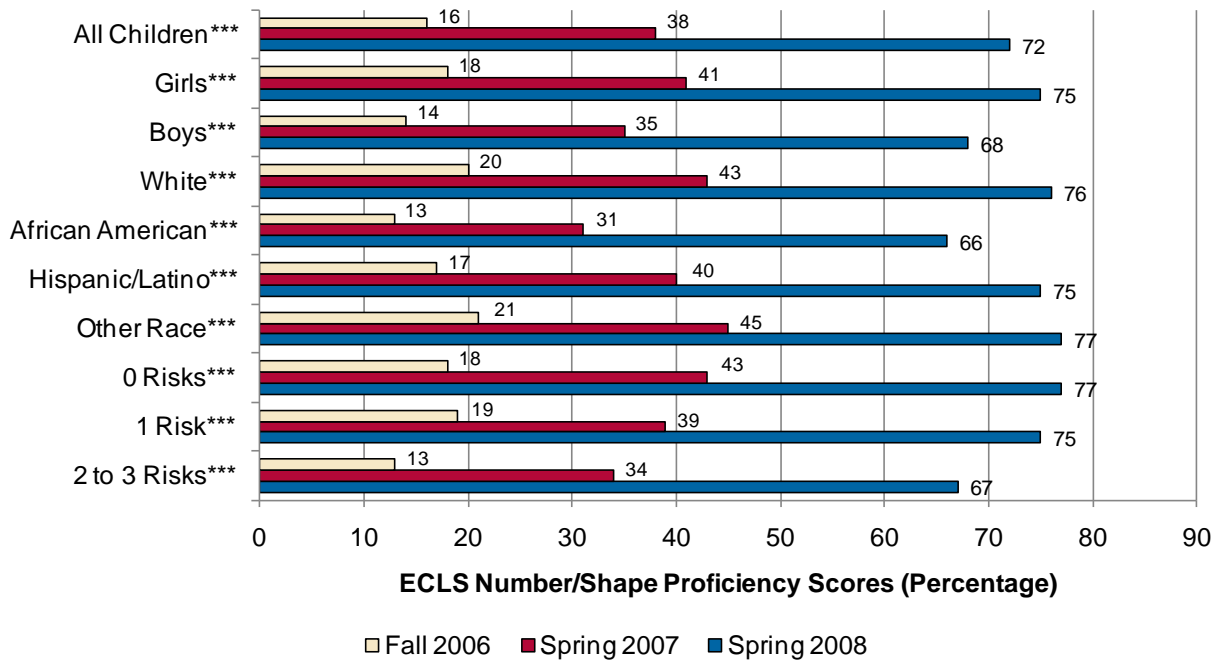
**Source:** FACES Fall 2006, Spring 2007, and Spring 2008 Direct Child Assessment

**Note:** Statistics are weighted to represent 3-year-old children entering Head Start for the first time in fall 2006 and who were still enrolled in spring 2008.

Asterisks indicate that a group experienced statistically significant change in the outcome between fall 2006 and spring 2008.

\*p<.05; \*\*p<.01; \*\*\*p<.001

**Figure 9. Percentage of Children Demonstrating ECLS Number/Shape Proficiency: Fall 2006 - Spring 2008**



Source: FACES Fall 2006, Spring 2007, and Spring 2008 Direct Child Assessment

Note: Statistics are weighted to represent 3-year-old children entering Head Start for the first time in fall 2006 and who were still enrolled in spring 2008.

Asterisks indicate that a group experienced statistically significant change in the outcome between fall 2006 and spring 2008.

\*p<.05; \*\*p<.01; \*\*\*p<.001

vocabulary (+6.1 standard score points and +6.1, respectively) and letter-word knowledge (+7.4 and +8.4 points, respectively). Notably, in the area of letter-word knowledge, girls score above the national average at program exit (105.0). They make progress toward norms in this area during their first year in the program, surpassing norms by the end of the first year (103.8). Meanwhile, at both of those time points boys score at national norms (100.4 and 101.1), making progress toward norms in this area during their first year in the program but no additional marked progress in their second year. In addition, unlike boys, girls make progress toward norms in early writing during program enrollment (+4.3 points). Finally, girls from Spanish-speaking homes completing a second year in the program (whose English skills allowed them to be assessed in English) demonstrate declines in their Spanish receptive vocabulary skills relative to peers during Head

Start enrollment (-3.4 points, respectively). Boys in this group do not demonstrate statistically significant declines in this area.<sup>29</sup>

On criterion-referenced measures, both boys and girls completing a second program year make progress across developmental areas. For example, on the ECLS math items, while fewer than 20 percent of girls are able to demonstrate number and shape skills at program entry, 75 percent are able to do so by program exit. The percentage increases from 14 percent to 68 percent among boys.

**Race/ethnicity.** Regardless of race/ethnicity, all children completing a second year in Head Start make progress toward norms in the area of receptive vocabulary in English (ranging from +5.1 to +7.9 standard score points). However, only White children score close to norms in this area at the end of their second year in the

program (98.5), while other children score one-third to two-thirds of a standard deviation below norms at that time point. Children from all racial/ethnic groups score above norms in letter-word knowledge by the end of the first year, with Hispanic/Latino and African American children making the largest gains during their first year in the program (10.5 points and 10.2 points, respectively). All children score near or above norms in early writing by the end of their second year in the program. However, only Hispanic/Latino children completing a second year in Head Start make progress relative to same age peers in early writing (+3.2 points), with these children scoring near norms at program entry and above norms by the end of their program enrollment. Regardless of race/ethnicity, children do not make progress toward norms in the area of applied problems during program enrollment.

On criterion-referenced measures, children from all racial/ethnic backgrounds make progress across developmental areas during their two years in the program. For example, while 20 percent of White children are able to demonstrate number and shape skills at program entry, by program exit 76 percent are able to do so. The percentage increases from 13 percent to 66 percent among African American children, 17 percent to 75 percent among Hispanic/Latino children, and 21 percent to 77 percent among Other race children.

**Family risk.** Regardless of number of family socioeconomic risks, in the area of English receptive vocabulary, children completing a second year in Head Start make progress toward these norms during program enrollment (ranging from 4.5 standard score points to 6.5 points). For letter-word knowledge, only children with one and two or more family risks make progress (+9.6 points and +10.4 points, respectively), although those with no family risks score above norms throughout their program experience. Across number of family risks, all children score at or above norms in letter-word knowledge by the end of the first program year, with children with one and two or more risks making gains during their first year in the program to catch up to the level of their peers

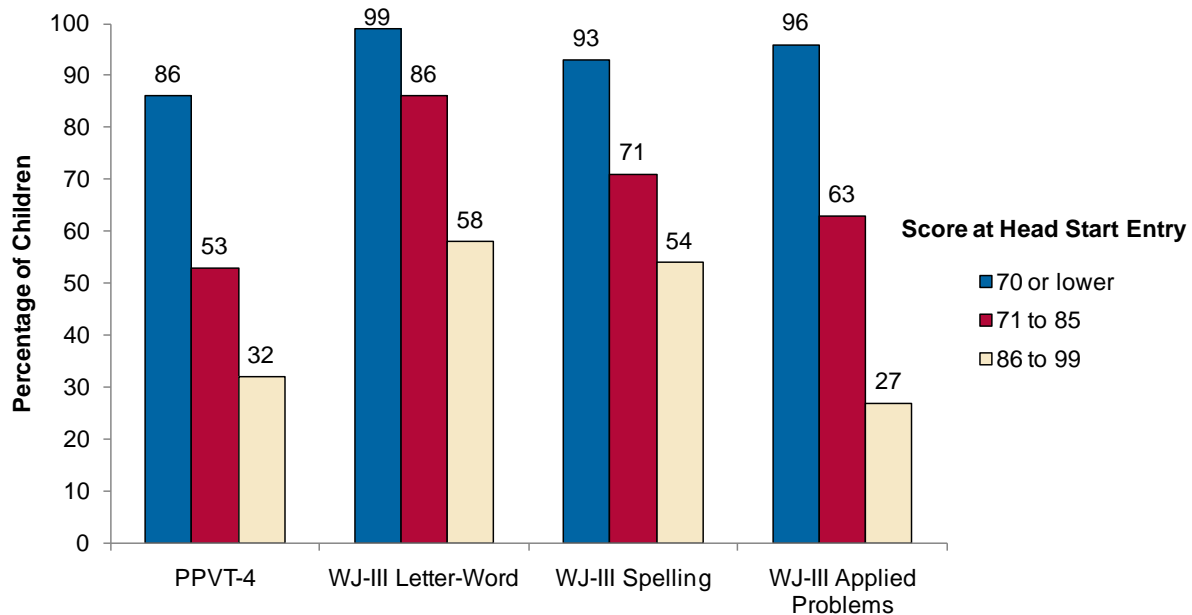
with no family risks. All children score near or above norms in early writing by the end of their second year in the program.

On criterion-referenced measures, children make progress across developmental areas during their two years in the program regardless of number of family risks. For example, while 18 percent of children with no family risks are able to demonstrate number and shape skills at program entry, by program exit 77 percent are able to do so. The percentage increases from 19 percent to 75 percent among children with one family risk and from 13 percent to 67 percent among children with two or more risks.

**Children's Progress During Head Start by Entering Skill Level.** Across developmental areas, many children completing a second year of Head Start make progress relative to peers during Head Start, which can be demonstrated by moving into a higher "category" defined by how many standard deviations from the norm they score. For example, among children who enter Head Start with English receptive vocabulary skills of at least two standard deviations below norms, 86 percent have moved to a higher category by Head Start exit (Figure 10). Few children who enter Head Start scoring below norms in this area make enough progress to reach norms by Head Start exit. Progress towards norms is particularly evident in children's letter-word knowledge and early writing. For example, about half of those scoring below norms at entry score at or above norms in letter-word knowledge by exit, including those who scored more than two standard deviations below norms at entry (Figure 11).

**Language Development of Dual Language Learners (DLLs).** As noted previously, FACES 2006 assesses the receptive vocabulary of children from Spanish speaking households in English and in Spanish. This approach provides an opportunity to understand the language development of this group of children both in English and in their home language. While there is variability in the vocabulary skills of DLLs from Spanish-speaking households, particularly based on their performance on the language screener, they experience gains in their English

**Figure 10. Children Completing a Second Head Start Year Who Enter Below Norms and Make Progress Relative to Peers at Head Start Exit**



Source: Source: Fall 2006, Spring 2007, and Spring 2008 FACES Direct Child Assessment.

Note: Statistics are weighted to represent 3-year-old children entering Head Start for the first time in fall 2006 and who were still enrolled in spring 2008.

receptive vocabulary during program enrollment on average. In fact, they gain 15.5 standard score points in this area, progressing from 68.9 (Head Start entry) to 74.2 (end of first Head Start year) to 84.4 (Head Start exit). About half of those who score more than two standard deviations below norms in this area at entry score between one and two standard deviations of norms at program exit, and another 20 percent score within one standard deviation of norms. In contrast, they experience losses in their Spanish receptive vocabulary skills during program enrollment of approximately 6.8 standard score points (86.9 [fall 2006], 85.4 [spring 2007], and 80.1 [spring 2008]). Only one-quarter percent of those who enter the program with Spanish receptive vocabulary skills at or above norms have skills at comparable levels at Head Start exit.

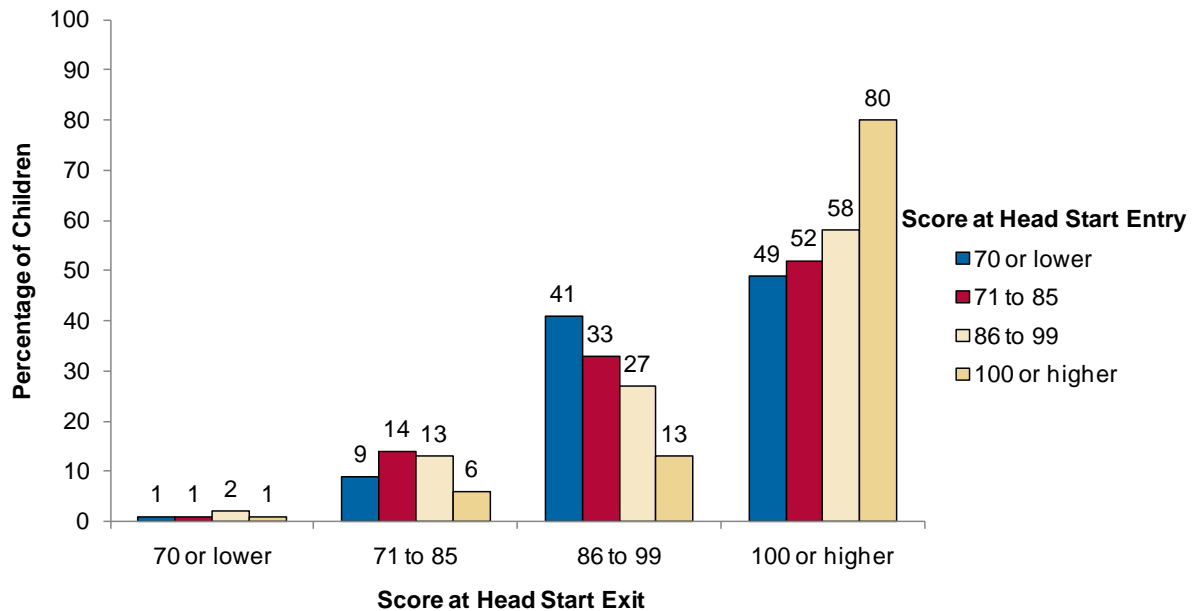
### **Child Social-Emotional Development and Approaches to Learning**

FACES 2006 provides multiple perspectives on children's positive and challenging behaviors

that may affect their ability to learn and interact with peers and adults. Head Start teachers reported on children's social skills, such as making friends easily and waiting his/her turn in games or other activities, as well as their problem behaviors in the classroom, such as being very restless and unable to sit still or disrupting ongoing activities. They also assessed children's approaches to learning, such as their attitudes toward learning new things, motivation to perform well, and attention/persistence on learning activities. Parents also reported on children's social skills and problem behaviors in the home environment. Finally, assessors rated children's behaviors during the direct child assessment in such areas as attention, organization, and impulse control; activity level; and sociability. Assessor ratings are the only social-emotional rating data that can be compared with normative data.

On average, teachers report that children who enrolled as 3-year-olds demonstrate more social skills by the end of their second year in Head

**Figure 11. Children’s Head Start Exit Letter-Word Standard Score by Their Head Start Entry Score**



Source: Source: Fall 2006, Spring 2007, and Spring 2008 FACES Direct Child Assessment.

Note: Statistics are weighted to represent 3-year-old children entering Head Start for the first time in fall 2006 and who were still enrolled in spring 2008.

Start (18.4 versus 14.8 out of a possible 24) and fewer problem behaviors (5.4 versus 7.8 out of a possible 36) on average (Figure 12). In particular, they report that children demonstrate fewer hyperactive behaviors as they complete the program, relative to their behaviors when first entering (mean = 2.2 versus 3.5 out of 12). Across time points, teachers rate children as having relatively strong social skills and few problem behaviors. In terms of approaches to learning, they report that children have significantly more positive attitudes toward learning (+2.9 points), motivation (+3.9 points), and attention and persistence with tasks (+4.4 points) by the end of their second year in the program.

**Gender.** Teachers report that both boys and girls demonstrate more social skills, more positive approaches toward learning, and fewer problem behaviors on average by the end of their second year in the program. The one exception is withdrawn behaviors, where

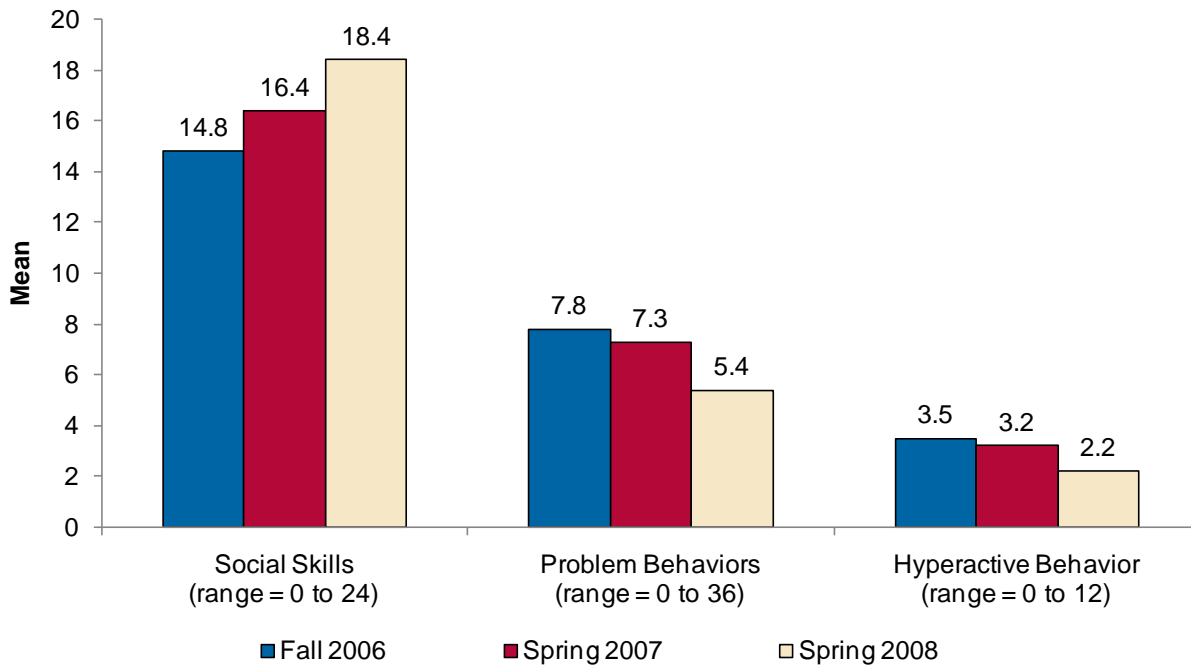
teachers report fewer withdrawn behaviors for boys but not for girls by program exit.

**Race/ethnicity.** While teachers report that all children demonstrate more social skills as they complete their second year of the program, they report a few differences by race/ethnicity in the prevalence of children's problem behaviors and approaches to learning. For example, teachers report that only Hispanic/Latino children demonstrate fewer aggressive behaviors, and only White children demonstrate fewer withdrawn behaviors.

**Family risk.** Regardless of number of family risks, teachers report that children demonstrate more social skills, more positive approaches toward learning, and fewer problem behaviors on average after two years in Head Start. The one exception is children's withdrawn behaviors, where teachers report that only children with no family risks demonstrate fewer such behaviors at program exit.



**Figure 12. Children’s Teacher-Reported Social-Emotional Development: Fall 2006 - Spring 2008**



Source: FACES Fall 2006, Spring 2007, and Spring 2008 Teacher Child Report.

Note: Statistics are weighted to represent 3-year-old children entering Head Start for the first time in fall 2006 and who were still enrolled in spring 2008.

All fall 2006-spring 2008 differences shown are statistically significant.

\*p<.05; \*\*p<.01; \*\*\*p<.001

### Child Health and Physical Development

About 17 percent of children who entered Head Start as 3-year-olds have been identified by their teachers as having a disability by the end of their second year in the program,<sup>30</sup> and one-fourth has more than one impairment or disability. The majority of children who have been identified (75 percent) are reported to have speech or language impairments.

Behavioral/emotional (17 percent) and cognitive impairments (17 percent) are also relatively common. Three-fourths of those with an identified disability have an Individual Education Plan (IEP) or Individualized Family Service Plan (IFSP).

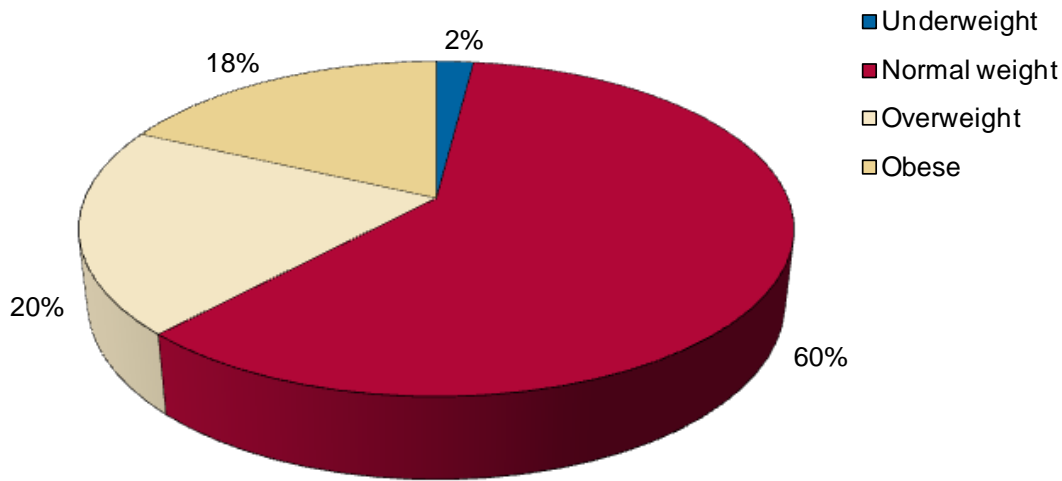
Sizable numbers of children who entered Head Start as 3-year-olds are overweight or obese. In fact, based on age norms provided by the Centers for Disease Control and Prevention (CDC), children who entered as 3-year-olds and

are completing a second year of Head Start have an average body mass index (BMI)<sup>31</sup> that is higher than the 50th percentile for their age range. About 20 percent of children who entered Head Start as 3-year-olds are overweight in spring 2008 and another 18 percent are obese (Figure 13).<sup>32</sup> A slightly smaller percentage (15 percent) of low-income preschoolers nationally was obese in 2008 (CDC 2009).<sup>33</sup>

In contrast, 79 percent of children who entered as 3-year-olds and are completing a second year of Head Start are rated as having "excellent" or "very good" health by their parents. Similarly, a majority of parents of first-time kindergartners nationally report their child's health to be excellent or very good (83 percent; U.S. Department of Education 2000).

**Gender.** At the end of the second program year, girls are reported to be in better health and have fewer identified disabilities than boys. For

**Figure 13. Child Body Mass Index (BMI) Categories, Spring 2008**



Source: FACES Spring 2008 Direct Child Assessment.

Note: Statistics are weighted to represent 3-year-old children entering Head Start for the first time in fall 2006 and who were still enrolled in spring 2008.

example, boys who entered as 3-year-olds are twice as likely as girls to have an identified disability (20 versus 12 percent, respectively). Boys with a disability (81 percent) also are more likely to have an IEP or IFSP than are girls with a disability (66 percent), suggesting disparities by gender in receipt of needed services. At the end of the second program year, parents of girls (82 percent) are more likely to rate them as having "excellent" or "very good" health than parents of boys (76 percent).

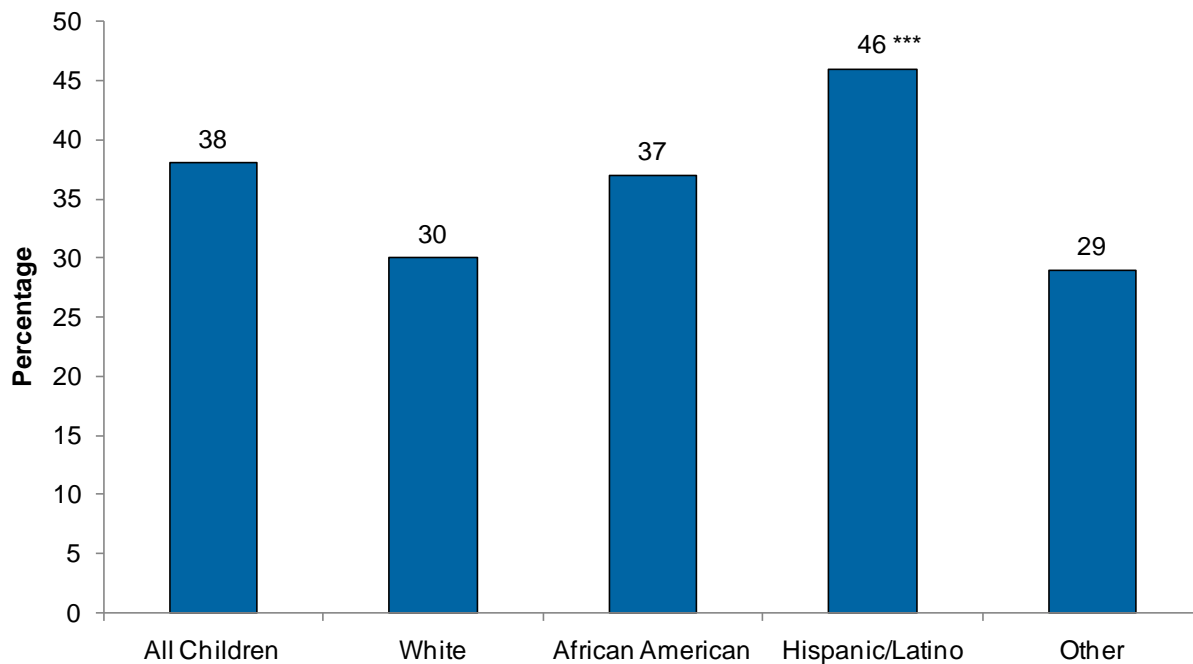
**Race/ethnicity.** White and Other race children who entered as 3-year-olds are more likely to have an identified disability than those from other racial/ethnic backgrounds. Among children with an identified disability, a larger percentage of White children have an IEP or IFSP, which suggests possible differences in access to services by race/ethnicity. White children also are more likely than children from other racial/ethnic backgrounds to have a physical impairment. On the other hand, Hispanic/Latino children are more likely than White children to have a speech or language impairment.

Although the rate of overweight and obesity is higher than national averages for all children, there are differences by race/ethnicity.

Hispanic/Latino children (46 percent) who entered as 3-year-olds are more likely than African American (37 percent), White (30 percent), and Other race children (29 percent) to be overweight or obese (Figure 14). These patterns are consistent with national trends. Nationally, obesity rates among preschoolers differ by race/ethnicity, with higher prevalence among American Indian, Hispanic/Latino, and African American children (Anderson and Whitaker 2009). Furthermore, parents of Hispanic/Latino children (74 percent) completing a second year of Head Start are less likely to rate them as having "excellent" or "very good" health than parents of children from other racial/ethnic groups. Hispanic/Latino parents (8 percent) are more likely to rate their children as having "fair" or "poor" health.

**Family risk.** Identification of disabilities is positively associated with the number of risk factors. The percentage of children with two or more family risks (20 percent) that have an identified disability is higher than those with one risk (13 percent). In contrast, among children with an identified disability, those with no risks are more likely to have an IEP or IFSP (92 percent) than those with one (71 percent) or two or more risks (74 percent).

**Figure 14. Child Overweight and Obese Status by Race/Ethnicity: Spring 2008**



Source: FACES 2008 Direct Child Assessment.

Note: Statistics are weighted to represent 3-year-old children entering Head Start for the first time in fall 2006 and who were still enrolled in spring 2008.

Asterisks indicate that a group is significantly different from all other groups.

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

At the end of two years in the program, children who entered as 3-year-olds with two or more family risks are more likely to have weight problems than other children. At one end of the range, they are more likely than children with no family risks to be underweight. At the other end, they are more likely to be overweight than those with one family risk. Parents with no family risks (86 percent) are more likely than parents with one (78 percent) or two or more risks (76 percent) to rate the child as having “excellent” or “very good” health at program exit.

### Summary

This analysis indicates that, although the families of children who entered Head Start as 3-year-olds face many challenges as children complete their second year in the program, they actively engage in activities that support children’s learning and report positive experiences and engagement in Head Start. For example, despite the prevalence of household-

level poverty, single parenthood, low education, and primarily speaking a language other than English at home, these families generally ensure that important resources and supports for children are in place. The majority of children have health insurance and their parents report active involvement in their learning through home- or community-based activities. Additionally, parents report high levels of satisfaction with their own and their children’s experiences in the Head Start program.

Looking at children’s developmental progress, children who entered Head Start as 3-year-olds and are still enrolled in spring 2008 begin their program experience scoring below norms across developmental areas. By the end of their second year in the program, however, they score at or above norms in their literacy development, including letter-word knowledge and early writing. In fact, they make statistically significant gains relative to peers in their letter-word knowledge during program enrollment (+7.9

standard score points). They also make progress in their vocabulary relative to peers during this time (+6.1 standard score points), although they remain below norms at program exit.

Teachers report that children who entered as 3-year-olds demonstrate more social skills and fewer problem behaviors by the end of their second year in Head Start. Parents generally report children to be in excellent or very good physical health. However, there are serious developmental and health concerns. Nearly 20 percent of children have an identified disability at program exit, with the majority of these reported to be speech or language impairments. More than one-third of children who entered as 3-year-olds are overweight or obese at program exit. Patterns within subgroups are similar to other estimates for preschoolers nationally. Across developmental areas, differences are present in children's outcomes by child and family characteristics. For example, children with two or more family risks are more likely to have a teacher-reported disability and are more likely to have weight problems than other children.

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## NOTES

<sup>1</sup> See West and Moiduddin 2010 for a comparison of 3-year-olds who stay in the program for two years versus those who leave after one year.

<sup>2</sup> We excluded from the frame Migrant and Seasonal Worker programs (MSHS), American Indian and Alaska Native (AI/AN) programs, programs in Puerto Rico and other U.S. territories, and programs not directly providing services to 3-, 4-, and 5-year-olds (such as Early Head Start). The Office of Head Start provided information about any defunded (or soon-to-be defunded) programs before sampling and we deleted these programs from the sample frame. Thirteen programs affected by Hurricanes Katrina and Rita in August 2005 were unable to provide information for the 2004–2005 PIR data and thus were not eligible for sample selection.

<sup>3</sup> We sampled children who were 3 years old and attending their first year of Head Start at a higher rate to ensure comparable sample sizes between 3-year-olds and 4-year-olds at the end of the kindergarten year, given the longer follow-up time for this younger group.

<sup>4</sup> Teachers completed 77 percent of the teacher child rating forms using the Web instrument.

<sup>5</sup> We did not include children who no longer were enrolled in the program where they were sampled in fall 2006 and were not enrolled in one of the other FACES 2006 programs in any of the follow-up data collections.

<sup>6</sup> For this group of children, children were assessed primarily in their homes, parents were interviewed by telephone or during the home visit, and teachers completed a Web-based or paper instrument that included questions about the children's schools, teachers, classrooms, and teacher ratings of children.

<sup>7</sup> A small number of children sampled as 3-year-olds were enrolled in kindergarten in spring 2008. These children are not included in the analytic sample for this report.

<sup>8</sup> Teachers completed 80 percent of the teacher child rating forms using the Web instrument.

<sup>9</sup> In spring 2008, we first attempted parent interview cases by phone, then in person during the study team's site visit week, and by phone after that week. We conducted 64 percent of completed parent interviews by phone.

<sup>10</sup> These are all weighted marginal response rates, not accounting for prior stages of sampling and participation. The cumulative weighted response rates, which take into account the response rate for prior stages of the sample (such as program, center, and child response rates), as well as fall 2006 consent rates, are lower by definition. The cumulative child response rate through spring 2008 is 83 percent. The corresponding response rates associated with completing the child assessments, parent interviews, and teacher ratings in spring 2008 are 80 percent, 77 percent, and 77 percent, respectively.

<sup>11</sup> See U.S. Department of Health and Human Services 2010 for more information on the direct child assessment battery and its administration.

<sup>12</sup> We outline the screening process and cognitive assessment measures in the section of this brief that describes children's cognitive outcomes.

<sup>13</sup> The preferred respondent for the spring 2008 interview was the child's biological mother or the fall 2006 and/or spring 2007 respondent.

<sup>14</sup> See Moiduddin et al. 2010 for the full set of statistics found in this report.

<sup>15</sup> We used weights to compensate for the differential probabilities of selection at the sampling stage (for example, 3-year-olds were sampled at a higher rate than 4-year-olds) and to adjust for eligibility at later rounds and the effects of nonresponse.

<sup>16</sup> Eligibility for Head Start is based on family income. The FACES Parent Interview addresses household income, which can differ from family income.

<sup>17</sup> Croninger and Lee 2001; Pallas et al. 1989; Rathbun and West 2004; Zill and West 2001.

<sup>18</sup> Downey et al. 2004; Rathbun and West 2004; West et al. 2001; Tarullo et al. 2008.

<sup>19</sup> We are able to provide less information on the skills of 3-year-old children who changed their language of assessment between Head Start entry, the end of their first Head Start year, and the end of their second year in the program, as these children receive different assessment measures at each wave. In addition, given the small number of children assessed in Spanish at Head Start exit, aside from the TVIP, we do not describe outcomes for children taking the Spanish assessments.

<sup>20</sup> The number of risks is based on three characteristics of children's living circumstances: whether the child resides in a single-parent household, whether the household income is below the federal poverty threshold, and whether the child's mother has less than a high school degree.



<sup>21</sup> All children, regardless of home language or performance on the Pre-LAS, received the English receptive vocabulary measure, the PPVT-4. The TVIP, a measure of children's Spanish receptive vocabulary, was administered to children whose primary home language was Spanish, regardless of performance on the Pre-LAS. Thus, children whose parents spoke Spanish to them at home received the receptive vocabulary component of the battery in English (PPVT-4) as well as Spanish (TVIP).

<sup>22</sup> The English assessment used the Woodcock-Johnson III subtests, and the Spanish assessment used the Bateria III Woodcock-Muñoz subtests. We do not describe findings from the Bateria III subtests in this report because of the small number of children who continued to be assessed in Spanish throughout their Head Start enrollment.

<sup>23</sup> FACES used 23 mathematics items from the ECLS-B in fall and spring of the Head Start year(s) and an additional 7 items from the ECLS-K in kindergarten (not reported here).

<sup>24</sup> For children receiving the Spanish version of the direct child assessment, we used a Spanish translation of the ECLS math and Story and Print concepts tasks.

<sup>25</sup> For the purposes of the direct assessment, we based home language on information provided on parent consent forms.

<sup>26</sup> For some children completing a second year of Head Start, we administered the cognitive assessments in Spanish (or not at all) in fall 2006 and then in English in spring 2007 and 2008. Similarly, some children were unable to achieve a basal on the PPVT-4 in the fall but achieved this in subsequent waves. Data in this section reflect the performance of children assessed in English in fall 2006, spring 2007, and spring 2008. In addition, we report mean scores only for those with valid scores at all occasions (for example, those who established a basal on the PPVT-4 at all waves). In an accompanying set of tables (Moiduddin et al. 2010), we provide additional tables that present the mean scores for all children completing a second year of Head Start who were assessed in spring 2008, regardless of language of assessment, child performance, or availability of valid scores in fall 2006 or spring 2007. In this set of cross-

sectional tables, children's mean spring 2008 scores are slightly lower (for example, 2 to 3 standard score points lower) than for children who were assessed in English at all three time points. Variability in children's scores is comparable for both sets of scores. We do not report findings from this latter set of tables in this report.

<sup>27</sup> Reported scores reflect the performance of 3-year-old children from Spanish-speaking homes who pass the threshold on the language screener and are assessed in English across waves.

<sup>28</sup> Measures of criterion-referenced performance include raw and W- or IRT-based scores. W scores allow for measurement of change or growth in performance on the same scale over time. Like raw scores, W scores are an indicator of absolute rather than relative performance. W scores are available for the WJ III and PPVT-4. ECLS math items also are scaled to reflect the number of items answered correctly or the percentage of children demonstrating mastery of skills or skill sets.

<sup>29</sup> These estimates are based on a small sample of children and so should be interpreted with caution.

<sup>30</sup> The percentage of children who enter the program at age 3 and who have a teacher-reported disability increases from 12 percent at Head Start entry to 16 percent at the end of the first Head Start year to nearly 17 percent at Head Start exit.

<sup>31</sup> Body Mass Index (BMI) is the ratio of an individual's weight to height and can be used as an indicator of overweight and risk for overweight status (<http://www.cdc.gov/healthyweight/>). Calculation of BMI is specific to gender and age.

<sup>32</sup> The percentage of children who enter the program at age 3 and who are overweight or obese increases from 33 percent at Head Start to 36 percent at the end of the first Head Start year to 38 percent at Head Start exit.

<sup>33</sup> CDC sets the criterion of *overweight* as the child's BMI score ranging from the 85th to 94th percentile for their age and gender, and *obese* as the child's BMI being at or above the 95th percentile. In some earlier FACES reports, the two categories have been labeled as *at risk of overweight* and *overweight*, respectively, based on prior CDC terminology.

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